DOCUMENT RESUME

ED 241 758 CE 038 557

AUTHOR Hughes, Ruth P.
TITLE Secondary Vocational Education: Imperative for Excellence. Information Series No. 277.
INSTITUTION Ohio State Univ., Columbus. National Center for Research in Vocational Education.
SPONS AGENCY Office of Vocational and Adult Education (ED), Washington, DC.
PUB DATE 84
CONTRACT 300-83-0016
NOTE 46p.; For related documents, see CE 038 535-539.
AVAILABLE FROM National Center Publications, National Center for Research in Vocational Education, 1960 Kenny Road, Columbus, OH 43210 (IN277--$4.95).
PUB TYPE Reports - Evaluative/Feasibility (142) -- Information Analyses (070)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Educational Improvement; Educational Needs; *Educational Policy; Educational Quality; Exceptional Persons; Federal Legislation; *Federal Programs; *Government Role; *High Achievement; Policy Formation; Program Improvement; Secondary Education; *Vocational Education

ABSTRACT

Since vocational education is part of the secondary educational system, a system that is presently under close scrutiny and looking for ways to improve, it is appropriate to determine what the federal role might be in helping to achieve excellence in secondary vocational education. Federal policy has helped to shape secondary vocational education since the first legislation in 1917, the Smith-Hughes Act, mandated programs for students not well-served by a college oriented academic program. Although this mission is still important to vocational education, more program areas are federally funded today with an increasing emphasis on services to special populations. To achieve excellence in vocational education, four policy alternatives are suggested: (1) productivity enhancement, (2) integration of vocational and academic programs, (3) allocation of funds to special needs populations, and (4) modification and continuation of the present pattern. The preferred alternative is to integrate vocational and academic programs. This policy option, addressing directly the imperative for excellence in secondary vocational education, provides career exploration and employability for all students, yet retains the opportunity for employment preparation during the later years of secondary education. (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED241758

Information Series No. 277

SECONDARY VOCATIONAL EDUCATION: IMPERATIVE FOR EXCELLENCE

Ruth P. Hughes
Iowa State University

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
  Minor changes have been made to improve reproduction quality.
- Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

1984

CE038557

THE NATIONAL CENTER MISSION STATEMENT

The National Center for Research in Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The National Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Providing information for national planning and policy
- Installing educational programs and products
- Operating information systems and services
- Conducting leadership development and training programs

For further information contact:

Program Information Office
National Center for Research
in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

Telephone: (614) 486-3655 or (800) 848-4815
Cable: CTVOCEDOSU/Columbus, Ohio
Telex: 8104821894

FUNDING INFORMATION

Project Title:	National Center for Research in Vocational Education, Applied Research and Development
Contract Number:	300830016
Project Number:	051MH30001
Act Under Which Funds Administered:	Education Amendments of 1976, P.L. 94-482
Source of Contract:	Office of Vocational and Adult Education U.S. Department of Education Washington, D.C. 20202
Contractor:	The National Center for Research in Vocational Education The Ohio State University Columbus, Ohio 43210
Executive Director:	Robert E. Taylor
Disclaimer:	This publication was prepared pursuant to a contract with the Office of Vocational and Adult Education, U.S. Department of Education. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official U.S. Department of Education position or policy.
Discrimination Prohibited:	Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Title IX of the Education Amendments of 1972 states: "No person in the United States shall, on the basis of sex, be excluded from participation in, or be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance." Therefore, the National Center for Research in Vocational Education Project, like every program or activity receiving financial assistance from the U.S. Department of Education, must be operated in compliance with these laws.

CONTENTS

Page

FOREWORD v

PREFACE vii

EXECUTIVE SUMMARY ix

CHAPTER 1. INTRODUCTION 1

- Past Policy and Outcomes 1
- Longitudinal Studies 4
- Present Conditions 6
- Equity and Excellence 9
- Summary 10

CHAPTER 2. CURRENT INITIATIVES 11

- New York: Futuring Project 11
- Iowa: Career Education Inventory 12
- Arkansas: Education Standards 13
- Local School Initiatives 13
- Summary 14

CHAPTER 3. THE POLICY PROBLEM 15

- Criteria for Assessing Alternatives 16

CHAPTER 4. POLICY ALTERNATIVES 21

- Productivity Enhancement 21
- Integrating Vocational and Academic Programs 23
- Allocate Funds to Special Needs 26
- Modify and Continue the Present Pattern 27

CHAPTER 5. THE PREFERRED ALTERNATIVE 31

- Proposed Activities 31
- Funding Patterns 32
- Concerns 32
- A Final Word 32

FOREWORD

Vocational education programs in the United States serve a diverse clientele with a multitude of programs in complex and diverse settings. This diversity and complexity of these settings contribute, in fact, to the federal policymaker's dilemma: how to formulate federal educational policy that is relevant in all settings.

Policy analysis, too, is complex and multi-opinionated. This dual complexity of programs and policy analysis presents special problems for developers of policy options. The policy analysts role is seldom simple, but the search for policy alternatives that are meaningful and useable is an essential undertaking if vocational education is to move forward.

Federal policymakers are the primary audience for this policy paper. However, state and local policymakers should find the presentation of policy options and the discussion of their advantages and disadvantages to be useful.

The National Center expresses its appreciation to Ruth P. Hughes, the policy paper author. Dr. Hughes is a Distinguished Professor and Department Head of Home Economics Education at the Iowa State University. She received a Ph.D. from Cornell University. Dr. Hughes has national and international home economics education research and development experience and has held numerous professional leadership positions.

In addition, the National Center expresses its appreciation to the following individuals who reviewed Dr. Hughes' policy paper: Dr. Fred S. Coombs, University of Illinois; Dr. Beryl Radin, University of Southern California; and Dr. Harry Silberman, University of California at Los Angeles.

Valuable assistance in selecting the policy paper authors was provided by Dr. Don Gentry, Indiana State Director of Vocational Education; Wilburn Pratt, Kentucky State Director of Vocational Education; Dr. Beryl Radin, University of Southern California; and National Center staff members Dr. Morgan Lewis, Dr. Wes Budke, Dr. Juliet Miller, Dr. Susan Imel, and Dr. Linda Lotto. Dr. William Dunn, University of Pittsburgh, conducted an informative policy analysis seminar for the paper authors. Additionally, National Center staff worked with the authors in identifying relevant literature.

The National Center is indebted to the staff members who worked on the study. The study was conducted in the Information Systems Division, Dr. Joel Magisos, Associate Director. Dr. Floyd L. McKinney, Senior Research Specialist, served as Project Director and Alan Kohan as Graduate Research Associate. Dr. McKinney, a former secondary vocational education teacher, holds a Ph.D. in vocational education from Michigan State University. He has served as a university coordinator of graduate vocational education programs and as a division director in a state department of education. Mr. Kohan is a doctoral candidate in comprehensive vocational education at The Ohio State University and has a M.Ed. in Curriculum and Instruction from the University of Hawaii.

Patsy Slone served as secretary for the project. Joan Blank and Roxi Liming provided technical editing and final editorial review of the paper was provided by Constance Faddis of the National Center's Editorial Services area.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

PREFACE

Federal policymakers need to be aware of alternative policy options before they can make decisions regarding the optimal resolution of critical problems in vocational education. By utilizing the expertise of vocational educators, the policy options should provide policymakers with information regarding anticipated impact, advantages and disadvantages of each alternative.

Recognizing this need of federal policymakers, the U.S. Department of Education, Office of Vocational and Adult Education (OVAE) requested that the National Center for Research in Vocational Education conduct a study for the purpose of preparing policy analysis papers in eight priority areas of high national interest. The areas identified by OVAE were (1) private sector involvement with the vocational community, (2) entrepreneurship, (3) defense preparedness, (4) high technology, (5) youth employment, (6) special needs of special populations, (7) excellence in education, and (8) educational technology.

In accordance with the instructions received from the Office of Vocational and Adult Education, The National Center for Research in Vocational Education conducted a limited competitive search for authors who would develop policy analysis papers on the eight critical issues in vocational education. Vocational education faculty members from educational professional development (EPD) institutions of higher education entered the competition by submitting a five-page proposal. No proposals were received on the topic of defense preparedness. After an extensive internal and external review process, eight authors were approved by the Assistant Secretary for Vocational Education, U.S. Department of Education.

The authors were provided assistance in policy analysis procedures, identification of relevant literature, and feedback of draft papers by policy analysts and educators. The authors presented their papers at a seminar in Washington, D.C., for key federal vocational education policymakers.

Other policy papers produced in this series are these:

- George H. Copa, University of Minnesota
  Vocational Education and Youth Employment
- Andrew A. Helwig, East Texas State University
  Alternative Training Options For Structurally Unemployed Older Workers
- Dennis R. Herschbach, University of Maryland
  Addressing Vocational Training and Retraining Through Educational Technology: Policy Alternatives
- Clyde F. Maurice, The Florida State University
  Private Sector Involvement with the Vocational Community: An Analysis of Policy Options

- L. Allen Phelps, University of Illinois
  An Analysis of Fiscal Policy Alternatives for Serving Special Populations in Vocational Education

- N. Alan Sheppard, Morgan State University, formerly at Virginia Polytechnic Institute and State University
  A Policy Analysis of Professional Development and Personnel Preparation for Serving Special Populations

- Gordon I. Swanson, University of Minnesota
  Excellence in Vocational Education: A Policy Perspective

Floyd L. McKinney
Project Director and Senior Research Specialist

Alan Kohan
Graduate Research Associate

EXECUTIVE SUMMARY

The purpose of this paper is to suggest federal policy that will encourage excellence in secondary vocational education. Even before several recent national reports (e.g., *A Nation at Risk*) were released, educators and policymakers were seeking ways to improve the enterprise. Their initial work intensified as reactions to the reports became public.

Vocational education and vocational educators were and are a part of this impetus. Of particular interest is secondary vocational education, not only because it is criticized in the reports, but also because it is an important part of the secondary school system and a part in which the federal presence has been important. Thus, it is appropriate to determine what the federal role might be in helping to achieve excellence in secondary vocational education.

Federal policy has helped to shape secondary vocational education since the first legislation in 1917, the Smith-Hughes Act. At that time, programs were designed for students not well served by a college-oriented academic program. That is still an important part of the mission today, but policy has added other directions. Whereas in 1917 a limited number of program areas were funded, the law changed in 1963 (Public Law 88-210, Vocational Education Act of 1963) to serve students in whatever vocational programs or courses were appropriate.

Beginning in 1963 and continuing through the 1976 legislation (Public Law 90-576, Vocational Education Amendments of 1968), the federal role has provided increasingly for populations with special needs, for populations in economically depressed areas, for sex equity, and for a variety of support services, such as research. Policy questions must address which of these should continue as priorities at the secondary level and which others, if any, should be added.

Deciding upon which priority to accept involves considering effectiveness studies, national reports, social and economic conditions, and state and local initiatives. In reviewing the effectiveness of past policy, one finds problems with traditional enrollment and employment data. Planning should provide for better data and for data that will more accurately reflect characteristics of successful programs.

Current national reports also have implications for policy. The first four, which are academically oriented, are the reports of the National Commission on Excellence in Education (1983), the Twentieth Century Fund (1983) task force, the Education Commission of the States (1983), and the Carnegie Foundation report (Boyer 1983) on high schools. Another report for the National Research Council, *Education for Tomorrow's Jobs* (Sherman 1983) is especially useful for policy considerations. To achieve excellence in secondary vocational education, the reports generally support increased academic rigor, preparation for use of new technology, development of higher-order skills (such as decision making and better communication skills), preparation for roles in the work force, and establishment of a system for assessing student progress.

Social and economic conditions also affect policy decisions. Conditions include societal problems beyond the control of vocational education, employment projections to which policy could

attend, types of workers needed, and problems of equity. The conditions noted support secondary vocational education programs that include basic skills (defined broadly enough to include not only academic and work skills but also skills for citizenship and family membership). The review also supports equity as a priority, although it calls attention to the need for service workers in low-paying jobs.

Selected state and local initiatives are also important to federal policy. They include a career education project with extensive assessment materials, a proposal for a curriculum that integrates the academic and the vocational, and consideration of more rigorous graduation standards. Such state initiatives may or may not be adopted as federal policy, but do suggest directions for excellence.

The policy problem is to determine the role of the federal government in achieving excellence in secondary vocational education. The problem is posed at a time when the federal government is intent on reducing costs of all programs except the military, yet the nation's citizens seek improvement in their educational system. Citizens are major stakeholders in the policy decisions, whether they are students, parents, teachers, or state and local school administrators. These policy recommendations cannot be made without considering their possible effect on people and circumstances.

Specific criteria for assessing policy alternatives for excellence in secondary vocational education involve improved student achievement, enhanced productivity, legitimacy as a federal initiative, cost, and equity with respect to students, states, and local education agencies.

Four policy alternatives are presented. All four options are based on reviews of past performance, on social and economic conditions, and on recommendations of the several studies of education. The first three restrict secondary funding to a single priority; the fourth includes several priorities.

Productivity enhancement as a priority would include education and training for new occupations, for entrepreneurship, for preparation to work in a new business or industry moving to an area, for facilitating ties between business and industry, or combinations of these initiatives. Parameters must be specific enough that they can be monitored but permissive enough to allow opportunity for innovation.

This policy option would lead to improved student achievement, encourage increased productivity, function effectively as a legitimate federal initiative, and not cost more than proposed funding levels. The policy option is less equitable than others, in that it does not provide specifically for special needs populations.

Integrating vocational and academic programs is proposed in direct response not only to the call for excellence, but also to recommendations for the establishment of a common curriculum in order to avoid the present stigma associated with being a vocational student. This policy option includes academic basics, opportunity to study and explore occupations and acquire employability skills, and preparation for employment. The first two are intended for all students in the early secondary years; the third is intended for vocational majors in the last two years of high school. The core would include topics similar to those in the New York State Futuring Project: personal development, social systems, information skills, resource management, and technology. The proposed core is designed to complement the academic basics, but is intended for all students. Included in the proposal is extra attention to students with special needs.

Student achievement should be highest under this option, but productivity would also be enhanced, although more in the long term than the short term. It is a legitimate federal initiative, but may be less acceptable politically than the other policy options. The cost would be somewhat higher because of the costs of teacher education activities. Cost could be controlled by limiting the number of schools involved, but this would decrease equity for states and local districts. Equity for students overall would be high.

Allocating funds to special needs populations is a policy alternative proposed in response to the overwhelming educational needs of this group. The priorities for the group could be similar to those proposed in the alternative policy options, but federal funds would be used *only* to provide these educational services for persons with handicaps, the disadvantaged, minorities, those from economically depressed areas, and those with limited English-speaking ability. The proposed policy option would also include remedial work, special services, programs for secondary students who are parents, and outreach to community agencies.

Student achievement would not be affected, except for the target group. Similarly, productivity enhancement, at least from the federal initiative, would be improved only for the target group. As a federal initiative, the alternative rates high, even though some special needs groups are served by other legislation such as the Job Training Partnership Act. Cost and equity could be adjusted to funding levels, much as is done now. Equity for students would be highest for this alternative; equity among states and local districts would vary, depending upon numbers of students in the several categories.

Modification and continuation of the present pattern is proposed because the current system has advantages. Several priorities, instead of one, provide not only financial support, but also the initiative that comes from the federal presence. If priorities for secondary programs include enhancement of productivity, provision for students with special needs, improvement of consumer and homemaking education, attention to economically depressed areas, and betterment of academic skills of secondary vocational students, the priorities will address many of the concerns covered in the other policy options.

Student achievement should improve in both the short and the long term, but less so than when academic and employment skills are the focus. The same is true of productivity enhancement. As a federal initiative, the alternative of keeping the present system would provide for the constituencies represented, and would probably be the most acceptable, politically. Neither cost nor equity would differ from the present system.

The *preferred alternative* is to integrate vocational and academic programs. This policy option addresses directly the imperative for excellence in secondary vocational education. It provides career exploration and employability for all students, yet retains the opportunity for employment preparation during the later years of secondary education. Compared to the other policy options, it is more expensive and less feasible politically; yet it has promise for removing the stigma of too-early tracking of students and for providing an excellent education for all secondary vocational graduates.

CHAPTER 1

INTRODUCTION

Excellence is a goal of any professional, and educators are no exception. Yet recent attacks on secondary education indict it as being mediocre, inferior, and failing to meet the needs of today's students. If today's education at the secondary level is not perceived as excellent, then what would make it so? It serves no students well to say that their education is not excellent unless one is willing to specify how excellence might be achieved.

The major reports on the problems of excellence in education approach excellence from different perspectives, yet authors and critics alike agree on a few general conditions. If students have an excellent education, they will be able to meet the demands of today's and tomorrow's rapidly changing workplace, will be able to assume the roles of effective citizen and family member, and will perform to the best of their abilities. To achieve those ends, citizens are called upon to support action to strengthen high school curricula; to raise expectations and standards for students; to raise standards, status, and pay for teachers; to bring closer together the education and the business enterprises; and to attend to the special needs of the underserved yet reject notions of class and caste.

Many have responded and continue to respond: educators, government officials, citizen groups, and business and industry. Vocational educators have also responded, even though vocational education itself is virtually ignored in the earlier reports and their recommendations. To date, most responses have occurred at state and local levels; the *federal* role for achieving excellence in secondary vocational education has not been addressed directly, even though the current education-related legislation is in the process of reauthorization. The purpose of this paper is to address the federal role and the policy alternatives that legislators might consider in formulating a federal response to the call for excellence in education, especially in secondary education.

Policy alternatives, however, need to be placed in context, both historical and contemporary. Included as context for this setting are a review of past policy and its effectiveness and a review of conditions in today's society that affect the search for excellence in secondary vocational education. As immediate background for proposed federal policy options, initiatives of selected states are also reviewed, since one of the concerns is the relationship of federal policy to state and local initiatives.

The framework in figure 1 illustrates the direction and organization of the body of this paper.

Past Policy and Outcomes

Vocational education in secondary schools began in the late 1800s, as educators sought ways to help people adjust to urban life or to life in a new country. By 1917, it became law, as the Smith-Hughes Act provided education for many noncollege-bound individuals. The nature of the law was

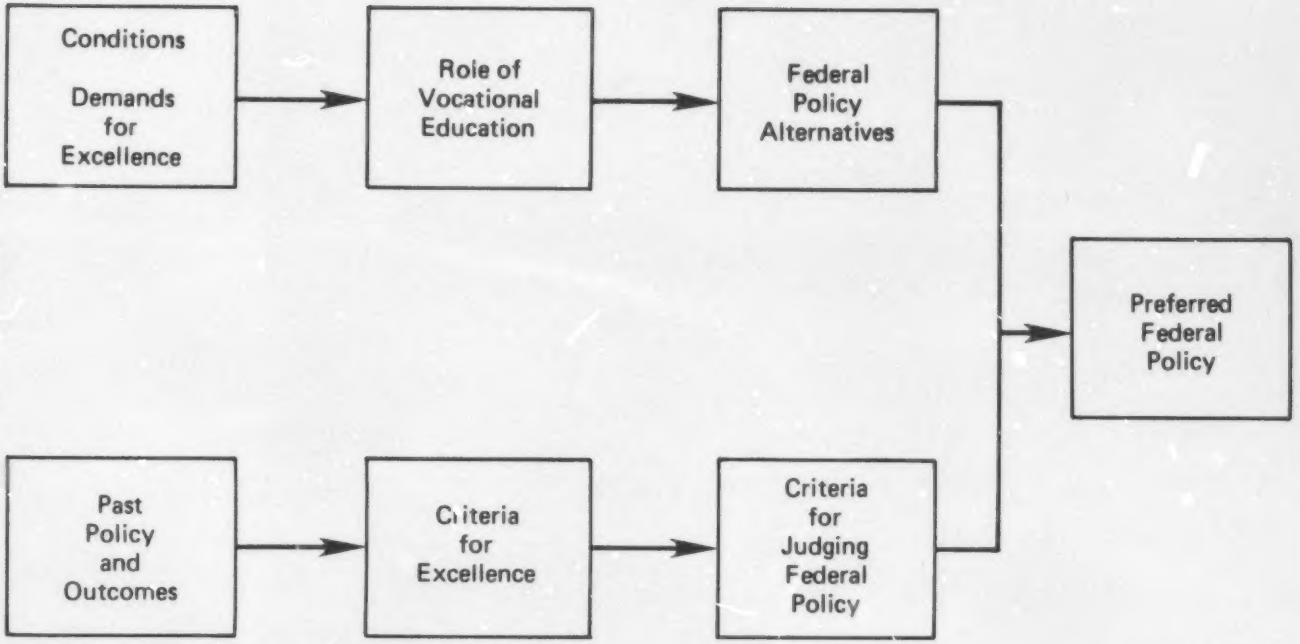

Figure 1

Excellence in Secondary Vocational Education: The Federal Role

such that vocational education became separated from the academic curricula in degrees varying by state or local school district. That separation exists today, and is a cause of pride or scorn, depending upon one's point of view.

The report (U.S. Department of Education 1981) of the U.S. Secretary of Education to Congress points with pride to the accomplishments of vocational education:

> Vocational education continues to provide a consistent flow of skilled, entry-level workers from its regular secondary and postsecondary programs, while meeting the needs of special population groups. In addition, vocational education has provided flexible, innovative programs that address the skilled workforce development that is needed to help solve our nation's problems. (p. vii)

The report also states that, in spite of problems with implementation of the current legislation, national needs have been and are being addressed. Further, the field reports increasing and successful service to special population groups, such as the handicapped; that is, those whose needs are greatest are in the programs.

On the other hand, vocational education has been severely criticized, especially at the secondary level and particularly by detractors from fields studying social policy, whether conservative or liberal. Illustrative are the scathing comments in *Fortune* by Sewall (1983), who says, among other comments on vocational education, that although the idea reaches "deep into national folklore . . . classes have become crucibles of illiteracy, fake diplomas, and chronic unemployment for their poorly prepared graduates" (p. 68).

Not surprisingly, Sewall is among those who would remove vocational programs from secondary schools. Others view that action as disastrous, and bound to force many more students out of high school before completion. Still others are examining the role of vocational education in today's secondary schools, studying the need for change, and responding to the many reports on the state of the nation's schools.

Consideration of past policy is a part of that activity, even though past policy in vocational education has been extensively reviewed and critiqued, most recently by the mandated study of the National Institute of Education (1980, 1981) (known as "the NIE study"). Many others have evaluated programs at various levels, from the local to the federal. Although a complete review of such studies is neither necessary nor appropriate, a brief review appears here in order that judgments of past policy may act as a basis for recommendations for the future.

Outcomes—Traditional Measures

Since the initial legislation, the numbers of students enrolled in classes, the numbers of teachers for those classes, the numbers of programs, and related statistical data have traditionally been used to determine effectiveness of secondary vocational programs. The data were and are used to justify funding at national, state, and local levels. Data were collected for everyone enrolled, whether the students were just taking an elective course or whether they were in a program of preparation for an occupation or for a cluster of occupations.

The inadequacies of these data, at least for federal policy, are noted in the interim report of the NIE study (National Institute of Education 1980), and by others. For example, in a special survey Brown and Gilmartin (1980) note two specific data deficiencies: (1) overstatement of numbers in

programs and (2) failure to include programs not oriented to specific, paid employment. Among the latter are programs in consumer and homemaking and industrial arts. Nor were those enrollees addressed accurately or adequately.

One effort to overcome some of the data problems is a procedure developed at the National Center for Research in Vocational Education (Campbell et al. 1981) for identifying vocational education students more precisely. Students who "major" in a particular service area by taking a sequential, planned series of courses leading to preparation for an occupation are called *Concentrators*. Those who take an occasional course or who take courses in a variety of service areas are called *Explorers*. The objectives of the two kinds of students are quite different and should be considered in evaluating policy.

Employment of vocational education graduates in the fields for which they were trained or in closely related fields also is considered a desirable outcome of vocational education programs. Employment data also have problems of validity and reliability, many for the same reasons as enrollment data. Further, reviewers point out that basing a program's success on employment of students fails to take into account the background of the students, their inabilities, and the quality of the program in which they were enrolled, and—perhaps most important of all—fails to take into account economic conditions in the community or region (Gustman and Steinmeier 1981).

Outcomes—Legislation from 1963

Federal legislation in 1963 (Public Law 88-210, Vocational Education Act of 1963) and 1968 (Public Law 90-576, Vocational Education Amendments of 1968) provided for and encouraged evaluation of programs. These provisions are especially important because the 1963 act departed sharply from past policy. Funding was no longer restricted to a few select programs, and provision was made for serving people of all ages (including secondary students), for ancillary services and research, and (in 1968) for students with special needs. But evaluative efforts were cursory until the Education Amendments of 1976, which carried evaluation imperatives.

Longitudinal Studies

The mandates in the 1976 act have resulted in many evaluative studies of vocational education, but several uses of national longitudinal data are especially important for policy affecting secondary programs.

Three national studies, methodologically adequate, have been used not only to judge the effectiveness of educational programs for vocational students, but also to compare students in academic programs with students in vocational programs. One is the *National Longitudinal Study of the Class of 1972* (National Center for Education Statistics 1972) and four follow-up data collections in 1973, 1974, 1976, and 1979. The second is *High School and Beyond* (National Center for Education Statistics 1980), with initial data collection in 1980 and subsequent follow-ups; the third is the *National Longitudinal Study of Labor Market Experience, New Youth Cohort* (U.S. Department of Labor 1981). This study is part of a series of studies, one set of which was begun in 1979 with students still in school.

High school transcripts obtained from the National Longitudinal Study (NLS) New Youth Cohort data base were added to other data by Campbell et al. (1981) to study labor market experiences of former secondary students with differing amounts of participation in vocational educa-

tion. As expected, the study found that students with a concentration in a specific area are more likely to be employed and that if employment is closely related to training, weekly earnings are higher. Other findings and recommendations take into account pervasive social problems and have important policy implications.

Students from secondary vocational programs are likely to have jobs characterized by low pay, low status, or both. Pride in such work and recognition of the value to society of those jobs is overdue. So, too, is concern for the quality of life of these job holders and their families. Youth, especially minority youth, are particularly hard hit by low-status jobs or failure to get a job at all (Campbell et al. 1981). Campbell et al. also note that although preparation for jobs available in a geographic area is an expectation, it is not without problems. High school graduates need not only skills to use immediately, but also skills that can be transferred as job changes and retraining are required. With respect to needs related to later change as well as initial choice, Campbell et al. suggest "supportive counseling that would encourage long-term concern for life goals" (p. 67).

In a recent national study (Mertens and Gardner 1983) designed especially to determine long-term effects of vocational education, the findings support those reported by Campbell et al. Former secondary students report being reasonably well satisfied with their education and they do have an advantage in earnings. The question of low-pay, low-status jobs is not addressed directly, although differences by service area suggest a need for concern. Mertens and Gardner also call attention to the need for carefully planned, long-term studies.

Vocational versus Academic Students

Although the studies cited provide modest support for vocational programs, others do not. One of the latter is by Meyer (1981; Meyer et al. 1983), who used NLS data from 1972 in widely reported studies for the National Commission for Employment Policy. Respondents are divided into three groups: those who have low or no vocational education, those with medium vocational education experiences, and those with high vocational education experiences, (defined as 35 percent or more of a student's coursework). In reporting what he calls the "cost" of substantial amounts of work in vocational education by comparing earnings of vocational and academic graduates, Meyer showed that vocational graduates have an initial advantage in jobs that do not require on-the-job training, but that over the years the advantage shifts to the academic students. With respect to program areas, women gain from commercial education and men benefit most from trade and industrial arts courses; but in both cases, differences disappear over the years.

Other researchers question Meyer's methodology (e.g., Fanslow and Motoyama (1982). They do not question that the vocational students make less money than academic students; they question the attribution of responsibility and the reliability of the income data. They found that students with lower ability have lower earnings, and that the number of semesters of a course does not explain income differences over the years.

Gustman and Steinmeier (1981) suggest other reasons for not relying on income data for comparisons of vocational students with nonvocational students. They propose an analysis to account for the economic welfare of students in the presence or absence of such a program, including the substitutability of a vocational program for on-the-job training and the impact of programs on the minimum wage. They also suggest that if programs increase in size, unique benefits to participants may diminish.

Bishop (1982) studied the relationship between vocational education provided by the school and on-the-job training provided by the employer. Based on reports from nearly four thousand employers throughout the country, Bishop reports that employers value school-provided training when related to the job, that they consider it a partial substitute for on-the-job training, and that vocational graduates' productivity is higher. On the basis of those findings, Bishop recommends that vocational education "focus on generic occupational skills that are useful in a great variety of jobs," that students have opportunities to explore jobs, and that they receive counseling with respect to personal training choices (p. 28).

Daymont and Rumberger (1982) agree that academic and vocational programs are not substitutes for each other, since some students may benefit more from one program than from another. The interaction between persons and jobs or between persons and methods or content of instruction may be such that vocational programs have net benefits to individuals that justify their higher cost.

Summary and Comment

Studies of the effectiveness of secondary vocational education reflect one of the intents of the 1976 legislation: to measure a program's success by whether or not students get jobs in their field and to gauge how effective employers consider their preparation. The studies cited are consistent with those in the NIE study (U.S. Department of Education 1981), in that these criteria were found to be inadequate for program improvement. If future policy calls for evaluation, it should be of programs as well as students.

Future policy may include such suggestions as those of Hanushek (1979), who calls for measures of programs and the differences among them, better measures of outcomes and the contexts in which they occur, and considerations of student characteristics and influences on them. Perhaps most important is his suggestion that a database be designed (or modified) to include (1) the more useful dimensions suggested and (2) the dimensions of the specific programs to be evaluated.

Present Conditions

Before turning to current policy issues, and before specifying criteria for assessing policy options for educational excellence, it is appropriate to review the conditions in which any modifications will operate. Conditions are examined via a brief review of the national reports and comments on prevalent social and economic situations and how they relate to questions of educational equity and excellence.

The National Reports

Four current reports address the quality of education in the nation's secondary schools: *A Nation at Risk* (National Commission on Excellence in Education 1983); *Action for Excellence*, (Education Commission of the States 1983); the *Report of Twentieth Century Fund Task Force on Federal Elementary and Secondary Education Policy* (Twentieth Century Fund 1983); and most recently, Boyer's (1983) report for the Carnegie Foundation, *High School*. All are critical of one or more aspects of secondary education in this country but have somewhat different perspectives.

The National Commission on Excellence in Education appointed by the U.S. Secretary of Education, was composed primarily of the academic elite. The commission examined the quality of education in the United States and emphasized public secondary education in its report. Its call for increased rigor in secondary programs has been well publicized.

The Twentieth Century Fund task force devoted itself almost exclusively to the federal role and emphatically recommended that the demands of equity and access should override all others. The task force also was courageous in its willingness to cite developments outside education as causes of the problems in secondary schools. Prominent among these were (1) demands on schools for nonacademic activities and (2) the adverse impact of unions and courts on opportunities for excellence.

Interestingly (or appallingly), the report of the Education Commission of the States (ECS) addressed economic growth but made absolutely no mention of vocational education. The panel included no vocational educators, relying instead on governors, legislators, business persons and a few educators. The ECS panel addressed the importance of global economic competition and of advancing technology (as have others), but failed to attribute causes to conditions beyond the control of educators. Recommendations included improvement in education for basic skills and competencies for employment.

Both the advisory panel and the observers for the Carnegie Foundation's high school studies (Boyer 1983) did not include *one person* whose identified position was at the heart of the vocational education community. Yet among the major recommendations are two on education and work. One recommendation deals with the need to help students, especially the noncollege-bound, make decisions about their futures. The second is the opportunity for career exploration during the last two years of high school.

There are other shortcomings of the four reports cited. A thoughtful review of them is presented by Howe (1983). Besides the lack of attention to vocational education, Howe cites omission of the costs of the suggested changes, too narrow a focus on cognitive elements and on persons in secondary schools, and not enough attention to issues of equity and access.

U.S. Secretary of Education Terrel Bell, who appointed the National Commission on Excellence in Education in August 1981, appointed another group in October 1981. He charged the Committee on Vocational Education and Economic Development in Depressed Areas to bring "a new perspective to the relationships among vocational education, economic development, and the private sector" (Sherman 1983, p. v). The committee's recommendations for training in basic and job-related skills of high school graduates were similar to those noted earlier. In addition, the committee called for strengthening the vocational education system, especially in the areas of teaching and financing. Noting that many fine vocational programs already exist, the committee also called for vocational education programs in general to become equal to college preparatory programs in quality and esteem.

These calls for excellence in secondary education *are* being attended, not only by academic fields but by vocational educators, as well. Most of the following recommendations, implicit or explicit in all of the reports, should be included as criteria by which to evaluate proposed federal policy:

- Increase the rigor of the secondary program; all reports mention math and science, specifically.

- Prepare students for the new technology; include use of the computer as one requirement.
- Emphasize the development of higher-order cognitive skills.
- Improve the ability of students to communicate; in this respect, the reports emphasize use of the English language.
- Seek ways to facilitate job changes, because persons will change jobs many times.
- Ensure that students are prepared to assume their roles in the work force.
- Establish a system for assessment of student progress; place responsibility at the federal level.
- Improve teacher education, both preservice and inservice; increase teachers' salaries.

Of particular concern and interest to vocational educators is the following recommendation of the National Commission on Excellence in Education (1983):

> The high school curriculum should also provide students with programs requiring rigorous effort in subjects that advance students' personal, educational, and occupational goals, such as the fine and performing arts and vocational education. These areas complement the New Basics, and they should demand the same level of performance as the Basics. (p. 14)

Economic and Social Conditions

For any aspect of secondary education, but especially for vocational education, present economic and social conditions affect policy decisions. Of particular importance are those conditions that affect vocational education but are beyond its control.

Silberman (forthcoming) notes that of the problems blamed on vocational education, some are problems of the larger society. For example, unemployment occurs outside schools, for reasons ranging from problems in international markets to the recalcitrance of both labor and management. Other problems occur because there is no consensus on goals, for which Silberman proposes exploration of future trends, including likely changes in the workplace.

Recommendations that Silberman makes assume the continuation of secondary vocational education; his recommendations are for ways to improve vocational programs. Chief among his proposals is specific training attention to intrinsic outcomes in three areas: technical skills and knowledge, communication skills and literacy, and personal skills and attitudes. Silberman also provides justification for the outcomes and procedures for achieving them.

Another who examines how education is affected by structural problems in the larger society is Reich (1983). He includes economic development and enhanced productivity among his proposed goals for educational policy. If Reich is correct, the causes of economic stagnation and the reasons for our failure to make improvements lie in the policies of business enterprises, labor unions, and government institutions themselves. He suggests that we move from high-volume, standardized production to flexible system processes (i.e., production geared to quick response to

new markets). This requires workers who are more concerned with quality than quantity and whose work tasks demand skill and judgment, even though the idea may be resisted by trade unions.

What jobs will be available in the future is of major importance. Projections have largely focused on the higher technologies and the jobs to be created in or by them. Although the percentage of those jobs is increasing, the fact is that the vast majority of jobs will be in the service industries. Kuttner (1983), for one, says that the middle class is declining, due to a shift from a traditional manufacturing economy to high-technology and service industries. Service industries have few jobs at the top levels and many low-wage, low-opportunity jobs in service activities. Most workers in the automobile industry, on the other hand, are highly paid production workers, with relatively few jobs at either the very top or the very bottom of the wage and status scale. It is these production jobs that are in decline, partly because of foreign competition and partly because they are more likely to be automated than low-paying jobs.

Kuttner's argument is supported by others, for example Levin and Rumberger (1983). They carefully document that, according to the best available estimates (i.e., those of the U.S. Bureau of Labor Statistics), employment growth from the creation of new jobs will be in high-technology industries and in low-skilled service areas. The highest *percentage* of increase is, as frequently noted, in high technology. But the greatest *number* of jobs is in the service area, and those jobs will account for a little over 13 percent of all occupations, whereas jobs in high technology will account for a little more than 2 percent.

Equity and Excellence

The extent to which equity in education is a deterrent or an impetus to excellence cannot be determined from existing data. We know that intervention programs, such as Head Start, have been successful. Further, a recent report of the National Assessment of Educational Progress (1983) shows improvements in the achievement test scores of disadvantaged students. On the other hand, achievement test scores of the academically more able have dropped. No one suggests that the one has caused the other, yet a question remains: Do the "special" groups improve at a cost to the gifted? If so, is it a price society is willing to pay?

Brimelow (1983) thinks not. He sees the public education system as an inefficient monopoly and cites its 46 percent decline in productivity between 1957 and 1979 among the evidence. His criticism includes the comment that "the prevailing orthodoxy in American pedagogy is . . . a culture that thinks in terms of equity and social reform rather than economic efficiency" (p. 63).

But Brimelow fails to comment on the unique problems of the subjects of equity, represented in one instance by the extremely disadvantaged children in inner-city schools. Ginzberg (1979), in a special report to the National Commission for Employment Policy, proposes a link between classwork-job opportunity that addresses a peculiarity of those children; that is, they have no knowledge about the world of work and an urgent need to learn what a job really is. Whereas the ordinary child has many models of adult workers, this is not true of the group discussed by Ginzberg.

Another equity concern is in learning styles. In describing the culture and learning styles of black children, Hale (1981) points especially to their affective orientation, considerable use of body language, systematic use of nuances of intonation and body positioning, keen sensitivity to others' nonverbal cues, and orientation to people. A highly structured learning environment is alien to

this style, and the teacher may be received with sullenness if not overt rejection. But most white teachers will not be aware of these characteristics and perceptions if they have no opportunity to learn about and experience them.

The policy concern is that, if there is to be an emphasis on equity, the policy must acknowledge means as well as ends. It does little good to say that the priority is to serve students with special needs unless teachers, facilities and the learning environment itself are conducive to their success.

Equity of access to jobs is a topic raised also by Kuttner (1983). If many high school graduates will have low-paying jobs, policy must acknowledge this situation. Possible policies might promote higher wages (most likely through unionization), and the recognition of the value of such jobs, as proposed by Campbell, Orth, and Seitz (1981). Other changes proposed by Kuttner (1983) are more political: finding better ways to distribute the wages available; increasing access of women (and youth) to good jobs presently reserved for white males; and giving more attention to some of the tedious jobs associated with new technology.

Another situation to which Kuttner calls attention is the plight of the two-earner family, describing the parents as "working full time, juggling baby-sitters, and wondering why they have no time even to watch television" (p. 72). In addition, there are the problems of the single-parent family, a particularly burdensome situation for women. In any consideration of policy, effects on families are a factor.

Summary

Present conditions in the economic and social environment directly affect any efforts to achieve excellence in vocational education. The various discussions of issues and reports of the several commissions support the following statements as bases for judging policy alternatives:

- Objectives for secondary vocational education are appropriately general, including (1) basic skills, broadly defined; (2) a study of work, school, and family; (3) personal skills and attitudes; and (4) communication skills.
- Social, political, and economic problems that affect schools are not caused by the schools; expecting schools to correct them is neither realistic nor fair.
- Attention must be given to preparation for and work in service jobs and to their place in vocational education, in the workplace, and in people's lives.
- Where there are trade-offs of equity for excellence, policy should ordinarily favor equity.

CHAPTER 2

CURRENT INITIATIVES

Underlying dissatisfaction with aspects of secondary education stimulated plans for reform even before publication of the recent national reports. However, action has intensified since the spring of 1983.

The task of documenting actions that relate specifically to program improvement in secondary vocational education is difficult because of the time lag between action and publication. Only one such initiative was identified in a current computer search, yet a regional group of state directors all reported major revisions either underway or being planned. They also expressed concern over the need to improve secondary programs, in particular. Illustrative is the statement by Prochaska (1983) that Kansas is looking at secondary programs now. Prochaska seems to reflect the views of others when he notes that, since 50 percent of high school students do not go on to postsecondary education, it is wrong to omit vocational education at the secondary level.

Among initiatives described by midwestern state directors are those in Arkansas (Ballard 1983) and Iowa (Athen 1983). New York (New York State Department of Education 1983) has reported on its program called the Occupational and Practical Arts Futuring Project. Those three are described next because they represent the kinds of state action already underway that federal policy should support and probably complement.

New York: Futuring Project

The New York project (New York State Department of Education 1983) is a model for a curriculum that integrates the academic with the occupational and practical arts (for which most vocational educators would use the term "vocational"). The changes that precipitated the project, the planning process, and aspects of the implementation are pertinent to any consideration of an integrated curriculum.

The project seeks to "meet the needs of an industrial system in which a spectrum of new technologies are emerging that require new job skills, and where the working environment, family life styles, and value systems are in a state of flux" (ibid., p. ii). The report also cites economic and demographic trends as further reason for review and revision of programs.

Preliminary work began in 1977, followed by discussion of the future, with input across all vocational service areas and within selected areas. Teachers, administrators, state staff, and university personnel worked with persons from a variety of businesses and industries, labor, and social service agencies, as appropriate to the topic under study.

An underlying principle of the project is that all ages of students at all levels of education have needs for occupational and practical arts education, often in combination with general education. Under the futuring plan, these needs will be met as students move along a continuum. Three

stages are included: foundation, development, and concentration. They apply to all ages, but during a regular progression, foundation is at the elementary level, development in middle/junior high school, and concentration in the later high school years and beyond.

Content at each stage is organized into five elements, defined more generally than areas such as agriculture or business. The five elements are personal development, social systems, information skills, resource management, and technology. Elements in the foundation phase include basic skills plus such topics as natural resources or people and machines. The development phase has material under all five elements, including some occupational exploration. At the concentration level, students learn an occupation or prepare to do so at postsecondary level.

Dimensions of the project are especially important for policymakers to consider. Among them are the tremendous involvement of affected and interested people across the state; plans for extensive testing of students and other procedures for continuous evaluation; and plans for adaptations for students with special needs.

The New York system will need some adjustment to conform to a recent state regents' plan for improvement of elementary and secondary education in the state. However, the system warrants serious study as one way of providing a core curriculum for all students. Depending on use at the local level, it may help eliminate the stigma frequently associated with secondary vocational education.

Iowa: Career Education Inventory

The Iowa inventory is a series of sequential measurement strands (i.e., tests) designed to help educational practitioners determine how well concepts of career education are acquired by students in their schools. The inventory follows an emphasis on career education that began in Iowa in the late 1960s. In fact, the design of the inventory follows the model designed and implemented in earlier work.

The elements of Iowa's career education program include the following:

- Awareness of self in relation to others and the needs of society
- Exploration of employment opportunities and experience in personal decision making
- Experiences that will help students integrate work values and work skills into their lives (Iowa Department of Public Instruction 1978)

Career development is sequential and, although not limited to any age, follows four stages: awareness and accommodation at the elementary level, exploration at the junior high level, and preparation at the senior high (or later levels). The categories of development are self, self and society, interpersonal relations, decision making, economics, occupational education, and work attitudes and values. These categories (or domains) are followed in sequence in each of the stages (or strands) of the inventory.

It is not only the inventory itself that is of immediate interest, however, important as it is. Most crucial here is the identification of content and the process for meeting the objectives for preparation for the role of worker and citizen in society. The similarity between the objectives and content of the Iowa and the New York projects is striking, although implementation is (or will be) quite dif-

ferent. The Iowa inventory provides a means for assessing instructional efforts and planning curriculum. The New York project is expected to be specially useful in providing instructional materials. Both projects also provide for integration of the academic and the vocational, inasmuch as both have a total curriculum approach.

Arkansas: Education Standards

An education standards committee was established in 1983 in Arkansas to propose criteria and standards for the state's public schools. The vocational education community prepared a position paper (Ballard 1983) explaining the importance of secondary vocational education in helping students with decision making, work attitudes, self-understanding, and specific vocational skills. The paper expresses a concern common to vocational educators in all states: that the current emphasis on academic subjects may seriously diminish the important contributions of secondary vocational education offerings.

The standards adopted in Arkansas address much more than vocational education, of course, but the focus here is on the vocational aspects. The standard retains practical arts in grades seven and eight, as well as in grades nine through twelve. The latter includes home economics, typing, industrial arts or exploratory vocational education, and access to job-specific vocational programs.

Documentation provided in support of secondary vocational education includes enrollment data, employment data, data in general support of the value former students place on their vocational courses, and the importance of an alternative way of learning. Although the word "excellence" is not used, the notions of quality and excellence for students are implicit in the report and the state standards.

The role of the federal government does not, and should not, include instituting such standards, as these are clearly a state (or state and local) decision. However, federal policy should recognize the very real threats to secondary vocational programs of overemphasizing academic subjects. Any federal policy alternative should recognize not only individual initiatives but also particular problems faced in the different states.

Local School Initiatives

Asche (1982) surveyed secondary vocational programs to identify innovative practices that address divergent views of "the purposes, clientele and delivery modes for secondary vocational education" (p. 2). He was particularly interested in programs that provide coordination of vocational and academic education, preparation for new or emerging occupations, school/industry/labor cooperation, and career exploration.

Noting that even his limited survey successfully identified many programs with the desired criteria, Asche also comments on various problems that he encountered. One is that "there is some evidence that present funding mechanisms may in fact discourage innovation for fear of loss of funding" (p. 26). Another is that present systems are not effective in disseminating information about innovative practices.

Such findings have implications for federal policy. Whereas curriculum materials (usually for traditional skills and populations) are relatively easy to acquire, information about creative programming is not. Paradoxically, the latter is the greater need.

Summary

Initiatives taken by states and local districts have implications for federal policy. The federal role may be based on successful state initiative(s), it may be designed to complement states' actions, or it may provide new directions. A review of current initiatives suggests the following:

- Vocational and academic programs probably can be integrated, at least at the lower secondary levels.
- States' policies emphasize the basics. In selected instances this carries over into secondary vocational education programs; in others it competes with them.
- Career exploration is a part of some state programs; vocational guidance may be a part of this. At least one state has a sophisticated system for determining the status of career education in schools.
- Of state programs studied, all include a formal, statewide assessment of student achievement as an integral part of the plan.
- Promising practices already in place are not routinely reported via dissemination systems.

CHAPTER 3

THE POLICY PROBLEM

The policy problem addressed here is what the role of the federal government should be in achieving excellence in secondary vocational education. The problem is posed in circumstances that apparently are contradictory. The government is intent on reducing its expenditures for everything except the military, yet the nation's citizens are alert to deficiencies in our educational system.

Parents, teachers, and students all have a stake in the policy decisions, especially the noncollege-bound and their parents and teachers—groups who may be ignored by state and local policymakers. Other stakeholders, the administrators and leaders in the vocational education community, are concerned about and affected by the federal role. The leaders will implement the federal imperative; the administrators stand to be affected by it. All stakeholders support the notion of local (or state) autonomy; yet they also look to the federal government for leadership and for help with pressing social and economic problems. They ask: What kind of education is best? Can vocational education be excellent? If so, how can the federal government help?

A decision as to what the federal role can be is complex, however—more complex than deciding on a policy that involves choosing among programmatic alternatives. Although the purpose of this paper is to make such a recommendation, the context in which it is made is an important, perhaps an overriding, factor.

Both the interim and the final report of the NIE study (1980, 1981) discuss in detail the complexity of the federal role. Of particular importance is the interrelationship of federal, state, and local policymakers in realizing the intent of federal policy. Further, there are political considerations that may impede the intent of any legislation.

Federal policy affects programs at the state and local levels, but unevenly. The shift in emphasis in 1963 from programs to participants was not implemented suddenly, but the needs of individuals and of special groups have been attended over time. The extent of the attention and the possible cost to other dimensions of the federal effort are concerns in selecting a policy option. Choice of alternatives carries with it concern over what is not done and its potential consequences to participants.

Goals of the present legislation are both social and economic; one doubts that the federal funding level will ever be high enough to serve both ends well. In past legislation, targeted groups have been served, but programmatic changes that were the intent of the legislation were less well carried out. As the NIE report (1981) notes repeatedly, the legislation was prescriptive in some respects but permissive in others. For example, 10 percent of the basic state grant was designated for service to the handicapped, yet states had considerable freedom in how they defined program extension, improvement, or maintenance. Thus, policy alternatives may determine the type of legislation needed; that is, if the expectation is very specific, decisionmakers will propose legislation that is prescriptive. If the policy option seeks innovation, then the legislation will be permissive.

The equity of funding to states is another complexity. Some states have only federal dollars for vocational initiatives, whereas others' initiatives are supported regularly and generously by additional state and local funds. Which is more equitable—a formula that awards a greater amount of money to states with fewer resources, or awards made on the basis of population (or populations to be served)? It is difficult for legislators from wealthier states to accept a policy that costs them more than they receive.

Other equity issues that policymakers will consider include services to urban versus rural schools, male versus female students, and as suggested earlier, students with fewer resources in ability and background versus students with more resources. All of these considerations are part of the climate in which the policy problem will be addressed. In considering the problem of how the federal government can help to achieve excellence in vocational education, consideration of policy options may be mediated by factors quite apart from the merits of a proposed alternative.

One other factor that cannot be ignored is the acceptability of any proposal to the current federal administration. Given that the present federal administration earlier proposed a block grant equal to about half the amount of money suggested by the vocational education community, it is difficult to expect financial support for any other policy (except, perhaps, for tuition tax credits or a voucher system). However, the kind of block grant that the present administration supports, as well as any notion of the tax credits or vouchers, is not acceptable to the majority of secondary vocational educators, nor are they likely to lead to excellence in secondary vocational education for the majority of stakeholders.

Although one cannot summarily disregard the federal administration, other considerations are offered next as criteria for judging alternatives for the federal role in achieving excellence in secondary vocational education.

Criteria for Assessing Alternatives

Criteria for determining how effective various policy options may be are derived from the review of present conditions, effectiveness of past policy, promising state and local initiatives, and the political context in which decisions are made.

Included in the criteria is the likelihood that a policy alternative will lead to (1) improved student achievement, broadly defined; (2) enhancement of productivity and other aspects of economic growth, including adaptation to new technology and preparation for emerging occupations; (3) costs, including administration through state education agencies (SEAs) and local education agencies (LEAs); (4) legitimacy as a federal initiative; and (5) equity.

Improved Student Achievement

This criterion is central to any policy option directed toward excellence in secondary vocational education. At the time of school completion, the more important achievements to be considered are basic skills (broadly defined), competency in a selected job grouping or portions thereof (or selection of such for further study), and orientation to the world of work. At selected times after school completion (i.e., two and/or five years), an evaluation would determine graduates' job success, job satisfaction, and successful integration of the roles of work and family.

As to materials for making such assessments, many already exist (e.g., the Iowa Career Inventory and selected portions of national surveys). In other instances, such as in integration of family and work roles, assessment materials and procedures would need to (and should) be developed.

With revision to allow for identification of states, the National Assessment for Education Progress (NAEP) could accommodate these assessments. So could portions of another national survey to follow *High School and Beyond*. But there is an important condition. Before data are collected, vocational *program* graduates should be carefully identified at the local school level. A second condition is that sampling should be used, much as is now done in the surveys mentioned, not only to ensure collection of the critical data, but also to reflect more adequately the populations served.

Some critics oppose use of student achievement as a criterion, arguing that it is a state or local concern, not a federal one. Yet national data are demanded by Congress; in fact, national data collected for other purposes have been used to judge secondary vocational education, sometimes unfairly. Policy alternatives should recognize this and provide for assessments of both program and student achievement.

Productivity Enhancement

Enhancement of productivity, or increased productivity, is a reasonable criterion for excellence. Dimensions of productivity that relate to general development of human resources are included in student achievement (e.g., basic skills and employability). Other criteria for judging the likelihood of increased productivity include the opportunity to learn and to use the newer technologies. At the secondary level, this should include computer usage; beyond that, it should include technologies appropriate to local employment possibilities. Legislation for this should be permissive with respect to specific technologies, but should be prescriptive with respect to school-industry cooperation.

Preparation for new and emerging occupations includes not only skills related to technology but also those needed in the large numbers of service occupations, whether as adaptations of existing occupations (e.g., retail clerk using a computerized record system) or as emerging occupations (e.g., personal care for the elderly). Another emerging need is training for entrepreneurship, often associated with a service. Does the policy option provide for these dimensions of productivity enhancement as well as for such readily recognized opportunities as an industry moving into an area?

Cost

An initial federal administration proposal would have allotted $500 million for all of vocational and adult education. The recently introduced bill, H.R. 4164, proposed an initial authorization of $725 million for basic state grants, and less may be appropriated. Thus, it is not realistic to propose programs that would cost much more.

Allocation of federal funds to the states for education is another dimension of the cost factor. The NIE (1981) report notes that procedures for disbursement in the past have been too complex and that too much has been expected for the resources provided. This same complaint has been voiced by others, including state directors, who suggest that fewer federal priorities (Mills 1983) be attached to use of the federal funds. The argument favors a policy that is relatively specific and

contains a more reasonable priority or set of priorities. The criterion, with respect to distribution of funds, is that the legislation be formulated in a way that permits decision makers to track the funds through to students.

Costs are related to program acceptance and administration are another factor, but they may be difficult to determine for different policy options. The costs of inservice training for teachers, the costs of administering the policy at both SEA and LEA levels, and the costs of facilities and equipment can probably be projected from experience. But criteria for assessing costs should also include related research and careful monitoring of student progress—elements not adequately provided in present programs.

Legitimacy as a Federal Initiative

The complexity of the federal role makes determination of the legitimacy of proposed alternatives difficult but especially important. The cost of administering a policy may vary, as may availability of matching funds.

Equity among states is also complex. In addition to urban-rural equity, there is the question of distribution. What is equitable: By population? By economic need? Such questions impact decisions of federal legislators in ways that reflect the demographic characteristics of different states.

Then there is the question of "the federal role." Does the alternative have promise of being accepted by SEAs and LEAs as a legitimate direction for federal leadership? Would the federal presence expedite acceptance and implementation of the option?

The comparative political attractiveness of alternatives to constituents is a major concern. Those options that are readily acceptable are easier to support. In an election year, reaction of constituents is monitored carefully. Thus the politics of the alternative will be considered.

Equity

Although the major intent of proposed policy options is to lead to excellence in secondary vocational education, equity cannot be disregarded among the criteria for policy choice. If there are to be trade-offs of equity and excellence, then equity should be favored. Equity of access is the most popular criterion, but others also need attention.

Review of alternatives for equity should include program accessibility for both males and females and for those with special needs. In providing access, is the program likely to do so without stigmatizing those who participate? Does the policy option provide for special help, as needed? Groups concerned with the equity issue include people who have difficulty learning and those who are unfamiliar with the world of work. These groups are likely to be concentrated in urban areas. If urban areas receive specific attention, what will be the consequences for rural areas?

Another aspect of equity is stigmatization of students because they are in a vocational program. Resnick and Resnick (1983) address this in their support of a single curriculum. Phrased as a criterion: will the policy option reduce such a stigma for vocational students? If so, what might be the reaction of academic students and their parents?

The equity criterion, as with the cost criterion, is complex. But even though one cannot be certain of all consequences of an alternative policy for equity, the dimension should be addressed in the policy options to be considered.

CHAPTER 4

POLICY ALTERNATIVES

The policy options discussed in this section address the most important considerations in achieving excellence in vocational education. Although there are those who propose that secondary vocational education be discontinued, the evidence favors its retention. Four policy alternatives are proposed, based on the reviews of background and current initiatives.

The first option, focusing mainly on enhancement of productivity, is supported by recommendations of groups studying productivity and employment—in particular, the Task Force on Education for Economic Growth (Education Commission of the States 1983) and the report of the National Commission on Excellence in Education (1983).

The second policy option proposes models of programs that place all students up to grade ten or eleven in a common core that combines the vocational with the academic. This directly addresses concerns of the two major studies of secondary education, the National Commission (1983) and Boyer (1983), both of which support a strong academic background for all secondary students as the first step to excellence.

The third policy option for achieving excellence is to direct all funds to programs for those with special needs, incorporating program improvements without substantially changing the structure.

The fourth option proposes to continue present funding patterns but to emphasize program improvement and expansion, with funding focusing on two aspects: (1) training for students in a preparatory program and (2) provision of occupational exploration and advisement as well as preparation.

Each policy option should have an evaluation plan that addresses, at the very least, (1) its effect on students; (2) its cost in dollars, facilities, and teacher skills; (3) effectiveness of instructional methods; and (4) information on how the program is received by parents and the community. Each option should also have a strong research component, directed to solving problems associated with the policy alternative.

The policy options proposed here refer specifically to use of funds for *secondary* vocational education. There is no intention that these proposals should directly affect programs at other educational levels.

Productivity Enhancement

Proposals for reauthorization of vocational legislation, task force reports in the various states, and vocational educators themselves perceive increased worker productivity as an outcome of

excellent secondary vocational education programs for the 1980s. This policy option closely follows the intent of the Vocational Technical Education Act of 1983: Education and training for new and emerging occupations, for entrepreneurship, for training students to work in business or industry moving to an area, for facilitating ties between the school and local business or industry, or combinations of these. Such uses may indirectly encourage high-technology industries to move into an area because of its well-trained work force.

Dimensions of the Policy

The policy would specify program content and procedures for meeting the stated purposes. The secondary grade level would not be specified, but neither would any secondary level grades be precluded. Some states will interpret secondary as seven to twelve, others as grades nine to twelve; the option should be left open. Further, parameters within the proposed dimensions should be specific enough that they can be monitored, but permissive enough to provide opportunity for innovation. This is in response to such comments as those of Asche (1982), who suggests that rigid funding requirements may preclude much-needed programmatic creativity. Specifically, the proposal is that federal funds for secondary programs be designated as follows:

- Provide for awareness and exploration of entrepreneurship as an employment option through incorporating the content into a selected course, or otherwise making it available through the programs offered in a school

- By program area or areas, as appropriate, establish working relationships with businesses, industries, and social service agencies in the community for the purpose of interchange of faculty and students with workers for occupational instruction, for review of curricula, and/or for sharing of facilities; further, use such contacts to monitor emerging or changing occupations and apply such information to curricular changes

- Provide for enhancement of productivity through instruction in related science, mathematics, computer and other technology areas, interpersonal communication, and orientation to work

Implementation. Implementation should include evaluation and research, as noted. In addition, implementation should require the following minimum procedures:

- Fund schools or programs on a basis similar to what is now done in the respective states. Since the policy might be incorporated in existing programs, the structure will not need to change.

- Ensure that planning and curriculum development include representation from appropriate businesses, industries, and social service agencies.

- Provide inservice training for vocational teachers, especially those who will be incorporating new content or courses in their programs.

Evaluation of the policy alternative. The policy should be evaluated for its probable effectiveness in meeting the criteria described earlier.

Achievement of secondary vocational students should approach excellence. An emphasis on enhanced productivity, as defined, should include achievement of basic skills, ability to work with

others, knowledge of technological advances in the community, and the opportunity to explore and prepare for new and emerging occupations. This policy option is probably equivalent to an integrated curriculum for student achievement; it is superior to other options in this area.

Productivity enhancement is the specific intent of the policy alternative, and should accomplish this to a greater degree than other alternatives. It does not guarantee a job, but neither do any other alternatives. What it offers is a good background in basic skills and exploration of careers with the likelihood that, in later years, job transfer and retraining will be facilitated. Although service jobs are not emphasized, they are included through relationships with social service agencies as well as business and industry. Thus, this policy option is considered most effective for improving productivity.

Legitimacy of this option as a federal initiative is high. Employability of students is politically attractive. It is already a general federal initiative of both political parties. It is a direction already underway in many states, but not in a way that would preclude a desire for federal funds; in fact, the joint efforts should be complementary.

The policy alternative is limited in scope, leaving room for exploration of the concept of productivity and its application in various regions. The federal presence could expedite and facilitate transfer of innovations from state to state, as well as coordination of research efforts.

Some results of this policy option would be short term, an advantage politically, particularly in school-community relationships. Effects on students would be longer term, but some results should be known in a few years. The more important outcomes (e.g., the ease of job retraining) are long term, but do not diminish political feasibility in the present.

Cost of productivity enhancement as a policy option is probably moderate. Nothing in the dimensions needs to cost more than present programs, with the possible exception of equipment for technology components. It compares favorably with other policy alternatives, except for the integration policy, which would be more expensive.

Equity has many dimensions. Access by both sexes should be no more of a problem with this policy than for the other alternatives, but other equity dimensions may be weaker. There is no provision for additional services for those with special needs, nor is it intended. Thus, even though such students are not excluded, the policy is designed for the average or better-than-average student. Urban-rural equity need not be a problem, but the policy will be easier to implement in larger communities. Compared with integration of vocational and academic or with funding special needs only, the policy option of focusing on improved productivity is less equitable.

Integrating Vocational and Academic Programs

Among the many citizens concerned with excellence in secondary education are those who see a role for secondary vocational education, albeit a different one from postsecondary training (Pratzner 1983). There are others (e.g., Resnick and Resnick 1983) who decry the separation between academic and vocational, claiming that the vocational students are stigmatized by the tracking that accompanies the separation. Both groups are right and both are wrong.

Separation of vocational and academic students must occur at some point if secondary education is to serve those who do not intend to get further formal education. Classes in trigonometry, physics, and advanced foreign languages will not serve all students; this creates a major need to

find other ways to serve them. Yet, if a good general education is needed by everyone—and there is general agreement on this—then we must seek a way to provide a good general education for all, and vocational preparation for those who want or need it.

Dimensions of the Policy

The alternative proposed is designed to provide two components of general education as well as vocational skills within the same organization. The three components are (1) academic basics, (2) opportunity to study and explore occupations and to acquire employability skills, and (3) preparation for employment. The first two are for all students; the third is for vocational majors only.

The policy option of funding efforts to combine vocational and academic areas should include many of the components, both content and process, of New York's Futuring Project. Content for academic basics and career exploration could also follow content established in the Iowa career model. Specifically, the legislation should provide for the following:

- Development of a core vocational/career curriculum for all students between grades six and ten, to include but not to be limited to the content suggested in the New York project (New York State Department of Education 1983), whose five elements and illustrations follow:

  Personal development—personal skills, health, decision making, interpersonal relationships, career exploration, work habits

  Social systems—family, community, economic, and political systems

  Information skills—communication, reading, speaking, keyboarding

  Resource management—use of money and time, consumer skills, natural resources

  Technology—use of materials and processes; tools and equipment; safety

- Incorporate in the core curriculum the study of career opportunities.

- Provide for occupational preparation in grades eleven and twelve through access to at least five programs or clusters.

- Provide additional instruction for those with special needs and/or provide for adaptation of programs to meet needs of special populations

Implementation. In addition to evaluation of the program and the related research stipulated for all policy options, the following would be appropriate:

- Identify schools or school districts for participation through a proposal process, much in the style of the original Head Start program. Proposers should meet the specified criteria but within that should be opportunity for innovation.

- Ensure that planning and curriculum development include (1) teachers and administrators from vocational and academic areas, (2) state department personnel, (3) teacher educators, and (4) representatives from business, industry, and social service agencies.

- Provide inservice training for teachers and administrators who will be implementing the program.

- Provide for development and testing of strategies and materials, especially those for use by students with special needs.

- Provide for articulation between secondary and postsecondary programs.

Evaluation of the policy alternative. According to the five criteria, the integration of academic and vocational should produce the results discussed next.

Student achievement under this policy option should be higher than under any other alternative except the productivity option, to which it is at least equal. The proposal includes attention to basic skills within the core as well as in the basic academic courses. The enhanced opportunity for study of self and the world of work and for practice in a variety of modes of communication and such other skills as decision making and problem solving should produce high achievement not only in academics but also on work and career choice inventories. Since the alternative mandates direct attention to those with special needs, their achievement should be higher than under any other policy option except the one directed at them exclusively.

Productivity enhancement will be second only to the policy option specifically aimed at productivity, but this outcome will evolve only in the long term. None of the policy options will provide jobs in depressed areas, but the option under consideration here will prepare students with an excellent background for understanding the world of work and making wise career choices, as well as for adapting to or retraining for different jobs over the years. Vocational and general educators alike have emphasized the importance of this dimension.

Legitimacy of this option as a federal initiative is mixed. A few states might adopt this approach, but it is not likely that many would without the federal drive. Yet this alternative addresses the most severe criticisms of secondary vocational education; it could lead to genuinely excellent programs. Further, this policy option might elicit support from critics of previous initiatives. One aspect of the option that is likely to receive mixed support is that it will not "maintain" all programs routinely but will fund them according to acceptability of a state's or district's proposal. In some states, this is already the case; in others, schools may reject or resent the federal presence, with accompanying pressures placed on federal representatives. Although the option is a legitimate federal activity, it may be unacceptable politically. Thus this alternative has more political disadvantages than do the others.

Cost of this policy option is potentially the highest of the four alternatives. The costs of planning, curriculum development, and teacher inservice training alone are probably as high for this one program as for the variety presently funded in secondary schools. The proposed occupational preparation programs in grades eleven and twelve will no doubt incur additional expense to provide the numbers of programs required. However, this option involves a curricular innovation for which federal funds may be legitimately used. As such, total costs could be controlled by limiting the number of programs funded. In other words, the cost need not be a deterrent.

Equity considerations of concern in this option are those of equity within and among states, alluded to as a cost factor. The option provides for students with special needs in program schools; whether those in nonprogram schools would be adversely affected would depend upon availability of other funds. Male-female equity would not be a problem, since access would be attended to in implementation. The one aspect of equity that this policy option addresses directly

is what some see as stigmatization of vocational students. In this case, there would be no separation of vocational and academic students until the later grades, at which time it would not be as much of a concern.

Allocate Funds to Special Needs

Educators need to continue to attend to the tremendous problems of the academically less able, the physically handicapped, the disadvantaged, and minorities. All these and others are seen as groups whose needs are greatest. All of the major reports on the quality and equity of current education address these needs; the Twentieth Century Fund (1983) report is strongest of all in its demands that federal leadership and resources be brought to bear on bringing these students into the mainstream. Nor did the National Commission (1983) disregard them, as it called for students to be aided in achieving to the fullest extent possible.

No call for excellence in secondary vocational education can completely ignore these groups. This proposed policy option would provide special assistance from *vocational* funds. The intent of this option is to propose choices, since funds available are not sufficient to address all needs. This choice would use all funds available for secondary vocational programs in support of achievement of excellence for those with special needs.

Dimensions of the Policy

The policy would not change existing programs, or at least would not necessarily do so. The intent is that funds would provide the additional services needed for special needs students to succeed. The designations might include the following:

- Provide remedial work for those behind grade level because of earlier disadvantage.
- Provide special services (or teachers) for those with handicaps or for those unable to succeed in regular classes.
- Provide child care for students with children when they cannot otherwise finish secondary school; include instruction in child care for these parents.
- Establish working relationships with other community groups whose concerns include these students.
- Include students with special needs in occupational preparation programs; provide appropriate experiences to make them employable.

Implementation. Implementation would include evaluation and research, as for the other policy options. The following are needed to bring about the dimensions described earlier:

- Fund first those programs with students in greatest need (e.g., those in inner cities and in isolated, poor rural areas).
- Encourage innovation in addressing the needs of these students; plan for interaction and coordination within regions of the United States and, if feasible, across the United States.

- Seek and fund promising plans for programs designed to serve any of the identified groups.

- Fund some programs for students at the early secondary level, especially those likely to bring students up to grade level.

Evaluation of the policy alternative. This policy alternative may be the most controversial of the four. Assessment according to the designated criteria reveals that, although it is rated generally lower than the others, it has compelling features.

Student achievement would not be attested to by increased scores on achievement tests, in that respect the policy option is not conducive to excellence. But excellence is relative; if it is academic excellence for those with special needs, then the proposal is directed toward that aspect of excellence.

Productivity enhancement, as with student achievement, would not be rated highly for this policy option by conventional standards. Special needs populations are not expected to be employed in the highly skilled jobs in the new technologies, yet such technology can enhance these individuals' productivity. Employability and success in a job are more difficult for these groups to achieve, but very important to the well-being of our society. This alternative seeks to make larger numbers of citizens self-sufficient or partially so, and thus would result in an important increase in productivity.

Legitimacy of this option as a federal initiative is high. Programs for special needs groups are popular at the federal level; the emphasis on this group in at least two of the major reports makes it even more acceptable as a target for federal policy. At the local level, there might be resistance from some powerful constituents, but the support of others in power has been compelling and probably would continue. To some, federal support of our neediest students is seen as critical and among its most important activities. Others would consider such programs as the Job Training Partnership Act (JTPA) sufficient for the target group.

Cost of the policy option of using all secondary funds for special needs groups could be as little or as much as is available. Use of vocational funds should be coordinated with other programs, such as JTPA and the Elementary and Secondary Education Act, but even then funding would not be excessive. The costs of bringing the facilities, programs, and teachers in inner-city areas up to standard are tremendous; funds would need to be allocated carefully in order to bring about the desired excellence for these groups.

Equity is highest for this policy alternative. The very groups for whom vocational programs have been criticized as inadequate are the ones that would be served directly. Equality of access by sex could be addressed. Equity by states and by location (as urban-rural) could be a concern, because some states have greater numbers and greater proportions of special needs students in their populations. Such states also have the greatest potential for social upheaval should these groups not be served adequately.

Modify and Continue the Present Pattern

Since 1963, vocational legislation has indicated the priorities for use of federal funds at the various educational levels served, sometimes by level (e.g., adults), but usually for all levels (e.g., sex equity). This variety of priorities has been criticized because it may be trying to do "too much

with too little." The criticism has been considered here and elsewhere, and is a reason for the policy options (with only one priority) that are proposed here.

However, the present system is not all that unpopular, and there is some reason to consider the admonition, "If it isn't broken, don't fix it." There are advantages to leaving the pattern more or less as it is. If the legislation were to limit the numbers of priorities and set asides, the system could continue as is for as long as legislators could be convinced of its usefulness. States' allocations could be made according to the current or similar formulae; administration and other responsibilities could continue as they are. This policy option is the easy solution, because professional groups, administrators, and local schools would not need to change their systems, and vocational educators would promptly respond to the new priorities.

Dimensions of the Policy

Since H.R. 4164 (U.S. Congress 1983) has been submitted, it seems appropriate to use the content of that bill as dimensions of this policy option. The bill seeks to expand and improve existing programs. The following, based on the bill, would fit initiatives for excellence in secondary programs:

- Design programs to prepare individuals for employment.
- Provide programs to meet the needs of those with special needs: disadvantaged, handicapped, minorities, and women.
- Improve the academic skills of vocational students, including those needed for application of new technologies.
- Improve the effectiveness of consumer and homemaking education.
- Assist the states in providing support services for these activities.

Implementation. This policy option, as well as the others, includes an evaluation and a research component. Beyond that, this option does not differ from the present system, although H.R. 4164 differs from previous legislation in that current concerns (e.g., technology) receive greater attention.

Evaluation of the policy alternative. The policy alternative of retaining the present pattern is different from the other three options in that it provides funding for several priorities, including special needs, attention to productivity enhancement, and instruction in use of the newer technologies. There is support for this option for the simple reason that it addresses the priorities already presented as separate alternatives. The following paragraphs discuss how it compares with the other proposals according to the same five criteria.

Student achievement would be improved over that of present vocational students in basic academics and in understanding and use of newer technology. This option should not be expected to have the degree of impact that would be shown by having the students served under either the options of productivity enhancement or of the integrated curriculum. However, the numbers of students served under the present system might be greater, since the other two alternatives are not designed to reach all students, at least not at the outset. For the long run, it is not possible to project differences except for the special needs groups, which would be better served by the policy option proposed for their exclusive benefit.

Productivity enhancement in the short run would be moderate to low, depending upon priorities of the states and local districts. As is the case at present, states would select priorities according to their needs. If academics and technology were a priority, productivity would be enhanced, at least in the long run. If the priority were special needs, others might be less well served.

Legitimacy of this option as a federal initiative is high. Because the priorities of several constituencies are addressed, support would be relatively widespread. The interest of the secondary vocational education community, in general, and more specifically, those of advocates of students with special needs, those who want to emphasize the basics, and promoters of high technology are all included in the proposal. Since 1963, the federal role has been to support priorities in vocational education that seek to promote excellence. The role is known and is not questioned within the vocational education community. When questioned outside, it is more on specifics than on intent. This policy option is highest of all four in its acceptability as a federal role.

Cost of this policy option is in line with existing legislation, since funding procedures and patterns would not change. It would cost less than effective implementation of an integrated curriculum. It does not differ from the possible costs of productivity enhancement or funding solely for special needs, because they are assumed to require the same amount of money as would this.

Equity concerns would not change from what currently exist, and would probably be about the same as reported in the NIE study (1980, 1981). That is, states would continue their efforts to serve students with special needs, and how well they succeed would probably depend on how prescriptive the legislation is. H.R. 4164, as introduced, does not include an objective on sex stereotyping, nor do any of the other policy options, except to ensure equity of access. It seems reasonable to state that the alternative is as equitable as the others for students. For states and local districts, it is more equitable than the integrated curriculum or special needs policy options and equal to the productivity enhancement option.

CHAPTER 5

THE PREFERRED ALTERNATIVE

Excellence in secondary vocational education is the objective that this analysis has addressed. The following four proposed policy options have dimensions of excellence: productivity enhancement, an integrated vocational and academic curriculum, use of funds exclusively for secondary students in special needs populations, and continuation of the present funding patterns.

Development and implementation of a curriculum that integrates the vocational and the academic is the preferred alternative. It shows the most promise for achieving excellence, as excellence is defined in the several major studies of secondary education.

Combination of the vocational with the academic keeps students together (as they are in elementary school) through grades nine or ten, a time when most high school students decide whether or not they will seek full-time jobs immediately after graduation. Further, this policy option addresses the most severe criticisms of secondary vocational education and of secondary education in general: stigmatization of vocational students, inadequate achievement in the academic basics, and failure to include either knowledge of the world of work or opportunity to explore possible occupations.

The integrated curriculum would need to be phased in over a period of years, probably five. The specific year-to-year activities proposed are given in the following boxes.

Proposed Activities

Year 1: **Seek proposals for developing exemplary programs; require that proposers include reviews of existing programs in their procedures. Write RFPs so that awards will include a variety of secondary schools by type and location. Include extensive personnel development.**

Year 2: **Planning year for awardees. Plan integrated curriculum for all students before grade ten, occupational preparation as a choice for students in grades eleven and twelve.**

Year 3: **Begin demonstration programs for integrated curriculum. Plan articulation to occupational preparation programs.**

Year 4: **Continue programs. Evaluate and revise. Plan research needed.**

Year 5: **Put demonstration programs in place. Plan dissemination activities.**

Funding Patterns

Year 1: Fund with national monies. Continue present program in states, but prepare for change in Year 2.

Year 2: Fund programs of states/districts with successful proposals. Continue to fund present programs but at reduced level.

Year 3: Fund demonstration programs and articulation. Last year of general support for present program.

Year 4 Funnel funds to integrated curriculum and grade eleven and twelve and on: occupational preparation.

Concerns

The most obvious concern is that some states, in some service areas, do not fund vocational education programs below grades ten or eleven. There will be resistance to use of funds for lower-level students because the amounts available at the upper grades will be reduced.

The expectation is that the integrated curriculum will be complementary to the academic subjects. It will require mutual planning by vocational and academic teachers which should strengthen both program and people, but it may also cause battles for "turf."

It is important to preserve the identity of the vocational service areas, at least in the foreseeable future. The integrated curriculum, as proposed, has content from agriculture, business, home economics, and industrial arts. Protection of the integrity of these areas could begin with the RFP; certainly it should be reflected in proposals and in later demonstration programs.

A Final Word

The proposal to use federal funds for a program that is not exclusively occupation oriented is new only to selected service areas in vocational education. We do not need to change, but if we are to have excellence in secondary vocational education, a change is due. The present interest in secondary education suggests that the time is now.

REFERENCES

Asche, Marion. "Innovation in Secondary Level Vocational Programs." Paper presented at the American Vocational Convention, St. Louis, MO, 8 December 1982.

Athen, Jim. "State Standards for Vocational Education." Presentation at the Iowa Department of Public Instruction Staff Meeting, Des Moines, IA, 14 November 1983.

Ballard, J. Barry. *Proposed Vocational Education Standards for Arkansas Public Schools*. Little Rock: Arkansas Department of Education, Vocational and Technical Education Division, 18 July 1983.

Barton, Paul E. "Responding to Change: Occupational Preparation in the 1980s." In *Responsiveness of Training Institutions to Changing Labor Demands*, edited by Robert E. Taylor, Howard Rosen, and Frank Pratzner. Columbus: National Center for Research in Vocational Education, The Ohio State University, 1983.

Bishop, John H. *The Social Payoff for Occupationally Specific Training: The Employers' Point of View*. Columbus: The National Center for Research in Vocational Education, The Ohio State University, November 1982.

Boyer, Ernest L. *High School: A Report on Secondary Education in America*. New York: Harper and Row, 1983.

Brimelow, Peter. "What to Do about America's Schools." *Fortune*, 19 September 1983, pp. 60-64.

Brown, Lawrence L., and Gilmartin, Kevin J. *Measures of Participation in Vocational Education: Enrollments, Students, and Exposure*. Technical Analysis Report Series, Report 1. Washington, DC: U.S. Office of Education, August 1980.

Brown, Rexford. *National Assessment Findings and Educational Policy Questions*. No. SY-CA-50. Denver, CO: Education Commission of the States, December 1982.

Campbell, Paul B.; Gardner, John; Seitz, Patricia; Chukwama, Fidelia; Cox, Sterling; and Orth, Mollie N. *Employment Experiences of Students with Varying Participation in Secondary Vocational Education: A Report Based on Transcript and Interview Data of the 1979 and 1980 National Longitudinal Survey New Youth Cohort*. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1981.

Campbell, Paul B.; Orth, Mollie N.; and Seitz, Patricia. *Patterns of Participation in Secondary Vocational Education*. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1981.

David, Henry. *Highlights of the Hearing on Vocational Education in the Comprehensive High School. American Vocational Association Board of Directors Meeting, 2 December 1982*. St Louis, MO: American Vocational Association, 1983.

Daymont, Thomas N., and Rumberger, Russell. "The Impact of High School Curriculum on the Earnings and Employability of Youth." In *Job Training for Youth: The Contribution of the U.S. Employability Development System*, edited by Robert E. Taylor, Howard Rosen, and Frank Pratzner. Columbus: National Center for Research in Vocational Education, The Ohio State University, 1982.

Education Commission of the States. Task Force on Education for Economic Growth. *Action for Excellence: A Comprehensive Plan to Improve Our Nation's Schools*. Washington, DC: ECS, June 1983.

Fanslow, Alyce, and Motoyama, Tetsuro. "The Effect of Secondary Home Economics Instruction on Income." Paper presented at the American Vocational Association Annual Meeting, St. Louis, MO, 3 December 1982.

Ginzberg, Eli. *Tell Me about Your School: Interviews with Elementary and High School Students in Harlem, New York City*. Washington, DC: National Commission for Employment Policy, no. 35, September 1979.

Gustman, Alan L., and Steinmeier, Thomas L. *Labor Markets and Evaluations of Vocational Training Programs in the Public Schools—Toward a Framework for Analysis*. Hanover, NH: Dartmouth College, January 1981.

Hale, Janice. "Black Children: Their Roots, Culture, and Learning Styles." *Young Children* 36, no. 2 (1981): 37-50.

Hanushek, Eric A. "Conceptual and Empirical Issues in the Estimation of Educational Production Functions." *The Journal of Human Resources* 14, no. 3 (Summer 1979): 351-388.

Howe, Harold. "Education Moves to Center Stage: An Overview of Recent Studies." *Phi Delta Kappan* 65, no. 3 (November 1983): 167-172.

Hughes, Ruth P. "Research Directions for Vocational Education: A Researcher's Perspective." In *Vocational Education Research in the 1980s*, edited by Henry David, Howard F. Hjelm, and Robert C. Harris. Washington, DC: National Academy of Science, July 1982.

Iowa Department of Public Instruction. *Iowa Career Inventory Interpretation Guide and Technical Report*. Des Moines: IDPI, March 1983.

Iowa Department of Public Instruction. "Why What How." *Iowa Career Education* (1978).

Kuttner, Bob. "The Declining Middle." *The Atlantic Monthly*, July 1983, pp. 60-72.

Levin, Henry M., and Rumberger, Russell W. "The Educational Implications of High Technology." *Technology Review*, August/September 1983: 18-21.

Mertens, Donna M., and Gardner, John A. "The Long-Term Effects of Vocational Education." *Journal of Vocational Education Research* 8 no. 2 (Spring 1983): 1-21.

Meyer, Robert H. "An Economic Analysis of High School Vocational Education: The Labor Market Effects of Vocational Education." Paper presented at the National Commission on Employment Policy, Washington, DC, 1981.

Meyer, Robert H. "Job Training in the Schools." Paper prepared for the Policy Forum on Employability Development. Columbus: National Center for Research in Vocational Education, The Ohio State University, 14-16 October 1983.

Mills, Joe D. "Vocational Education Program Improvement for the 1980s." In *Vocational Education Research in the 1980s*, edited by Henry David, Howard Hjelm, and Robert Harris. Washington, DC: American Vocational Association, 1983.

National Assessment of Educational Progress. NAEP Newsletter 16 (Spring 1983): 1-8.

National Center for Education Statistics. *High School and Beyond*. Washington, DC: NCES, 1980.

National Center for Education Statistics. *The National Longitudinal Study of the High School Class of 1972*. Washington, DC: NCES, 1972.

National Commission on Excellence in Education. *A Nation at Risk . . . The Imperative for Educational Reform*. Washington, DC: Government Printing Office, 1983.

National Institute of Education. *The Planning Papers for Vocational Education Study*. Vocational Education Study Publication no. 1. Washington, DC: Government Printing Office, 1979.

National Institute of Education. *The Vocational Education Study: The Final Report*. Vocational Education Study Publication no. 8. Washington, DC: Government Printing Office, September 1981.

National Institute of Education. *The Vocational Education Study: The Interim Report*. Vocational Education Study Publication no. 3. Washington, DC: Government Printing Office, September 1980.

New York State Department of Education. Office of Occupational and Continuing Education. *Futuring of Occupational and Practical Arts Education: Report to the Field, May 1981-March 1983: Home Economics Education Draft Recommendations*. Albany, NY: NYSDE, 1983.

Pratzner, Frank C. "Secondary and Postsecondary Vocational Education: Needed Distinctions." Columbus: National Center for Research in Vocational Education, The Ohio State University, 1983. (Unpublished)

Prochaska, Dean. "Conference Summary and Challenge." Presentation at the Fall Regional State Directors Meeting, Ames, IA, 26-28 October 1983.

Reich, Robert B. "The Next American Frontier." *The Atlantic Monthly*, March 1983, pp. 43-58.

Resnick, Lauren B., and Resnick, Daniel P. "Improving Educational Standards in American Schools." *Phi Delta Kappan*, 65, no. 3 (November 1983): 178-180.

Sewall, Gilbert. "Vocational Education That Works." *Fortune*, 19 September 1983, pp. 68-78.

Sherman, Susan W., ed. *Education for Tomorrow's Jobs*. Washington, DC: National Academy Press, 1983.

Silberman, Harry F. *Determining Goals for Vocational Education*. Columbus: National Center for Research in Vocational Education, The Ohio State University, forthcoming.

Silberman, Harry F. "High School Vocational Education. An Intrinsic Perspective." *UCLA Educator* 21 (1979): 46-51.

State of Iowa. *Report of the High Technology Task Force to the Honorable Robert D. Ray*. Des Moines, IA: State of Iowa, 1 November 1982.

Thurow, Lester C. "Vocational Education as a Strategy for Eliminating Poverty." In *The Planning Papers for Vocational Education Study*. Vocational Education Study Publication no. 1. Washington, DC: National Institute of Education, April 1979.

Twentieth Century Fund. *Report of the Twentieth Century Fund Task Force on Federal Elementary and Secondary Education Policy. Preliminary Report*. New York: 1983.

U.S. Department of Education. *NCES Reports on the Condition of Education*. Washington, DC: National Center for Education Statistics, June 1983.

U.S. Department of Education. *Vocational Education: Report by the Secretary of Education to the Congress*. Washington, DC: USDE, 1981.

U.S. Department of Labor. *National Longitudinal Study of Labor Market Experience, New Youth Cohort*. Washington, DC: USDL, 1981.